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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,591	10/30/2003	Richard Holzmann	TMS-0002	8315

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EXAMINER

TRAN, VINCENT HUY

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/697,591	Applicant(s) HOLZMANN, RICHARD	
	Examiner Vincent T. Tran	Art Unit 2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/30/03 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Action is responsive the application filed on October 30, 2003. Claims 1-7 are pending for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 recites the limitation " the control module **periodically checking** the load priority queue to determined if data segments are stored in the load priority queue " in line 11. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 7 recites the limitation "to **immediately** check the load priority queue" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1, 3, 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Berenguel et al. U.S. Patent 6,389,509

8. Berenguel et al. disclose a solid state disk system comprising:

a non-volatile storage media [20 fig. 1];

a memory module [22 fig. 1];

an interface module for communicating with a computer network [24 fig. 1];

control module [30 fig. 1] operatively coupled to the non-volatile storage media, the memory module, and the interface module;

a load priority queue stored by said control module for maintaining a list of data segment requests received by said interface module[col. 11 lines 46-52];

a sequential load map [38 fig. 1] stored by said control module for storing the order in which data segments are copied from said non-volatile storage media to said memory module during start-up of said solid state disk system [col. 8 lines 27-35];

said control module; during start-up of the solid state disk system, copying data segments from said non-volatile storage media to said memory module in the order listed in said sequential load map [step 100-102-104-106-108-110 fig. 4; col. 110 lines 9-12];

said control module, during start-up of the solid state disk system, checking the load priority queue [col. 11 lines 46-54];

said control module, if data segments are listed in said load priority queue, temporarily stopping said copying of data segments listed in said sequential load map [step 62-56-58-59 fig. 2];

said control module copying the data segments listed in the load priority queue from the non-volatile storage media to said memory module [step 59 (69)-70-72-74 fig. 2];

said control module, after all data segments in said load priority queue have been copied, resuming said copying of data segments listed in said sequential load map [step 74-56 fig. 2].

9. As per claim 3, Berenguel et al. teach said interface module, upon receiving a read or write request from said computer network, issues a command to said control module to check the load priority queue [col. 10 lines 17-22; col. 16 lines 46-50].

10. As per claim 5, it is noted that the limitation do not substantially differ from claim 1, which the exception of the limitation reciting “ the control module **periodically checking** the

load priority queue to determined if data segments are stored in the load priority queue.” As demonstrated previously, the teaching of Berenguel et al. anticipated the limitations in claim 1. The limitation regarding the control module periodically checking the load priority queue is also anticipated, as disclosed by Berenguel et al. in col. 11 lines 46-51.

11. As per claim 6, see discussion in claim 3.

12. As per claim 7, Berenguel et al. do not explicitly teach, upon receiving a data access request form the computer network, the interface module issuing a command to the control module to immediately check the load priority queue. However, this feature is deemed to be inherent to the Berenguel et al. system as col. 10 lines 17-22 shows the system needed to keep tracks of which pages of blocks have been successfully completely transferred during the process in case the process gets interrupted by a read request from the host because, upon receiving the read request, the control module had to stop the transferring process immediately in order to perform the read request.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berenguel et al. as applied to claim 1, 3 above, and further in view of Yamagami et al. U.S. Patent 5,592,630.

17. As per claim 1, Berenguel et al. teach the memory module is a hard disk cache.
Berenguel et al. do not teach the memory module is a RAM module.

Yamagami et al. teach another systems related to a data transfer system having a storage device such as disk having a memory module capable of transferring data at higher speed than the storage device. Specifically, Yamagami et al. teach the memory module is a RAM module [107 fig. 1]. At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the memory module of Berenguel et al. with a RAM module of Yamagami et al. to further accelerate the reading and writing to and from the data storage since it is well know in the art that RAM has a much higher access rate than of the hard disk module.

18. As per claim 4, Yamagami et al teach the control module issuing a notice to said interface module when all data segments listed in the load priority queue have been copied from said non-volatile storage media to said memory module [1207 fig. 14].

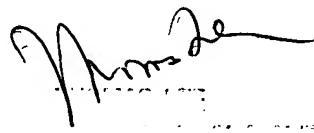
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent T. Tran whose telephone number is (571) 272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Tran



Vincent T. Tran
Examiner
Art Unit 2115